

# Coconino Community College

## Construction Technology Management Dept.



- ❧ Sustainable Green Building (AAS)
- ❧ Alternative Energy Technology (AAS & Certificate)
- ❧ Green Building Categories
- ❧ Environmental and occupant issues
- ❧ Energy Efficiencies
- ❧ Sustainable Building design
- ❧ Mobile Workforce Unit



Owner: Coconino Community College  
Award: Community Model

# Barnard & Vosick Residence



- ❧ Multigeneration purpose design
- ❧ 2.6kw photovoltaic solar panels
- ❧ All faucets, showerheads and toilets are low-flow
- ❧ Low VOC materials
- ❧ Rainwater collection for irrigation
- ❧ Xeriscape with native seeds to restore site
- ❧ Passive solar design
- ❧ Durable finishes for flooring, roof & siding
- ❧ Heat Recovery Ventilator
- ❧ On-demand hot water system
- ❧ In-floor heating, 96% efficient gas
- ❧ Building envelope highly insulated and tightly sealed to prevent energy loss.



Owner: Geoff Barnard & Diane Vosick  
Builder: Dave Pabst  
Designer: Hope Construction  
Award: Intermediate



# Eccleston Residence



- ❧ Insulated Concrete Forms (ICF)
- ❧ Evacuated tubes, solar thermal heating for domestic hot water and radiant floor heating
- ❧ Excess building materials donated to a non-profit building association
- ❧ No chemical or herbicides used on site
- ❧ Rainwater harvesting and greywater system
- ❧ Energy Star appliances and LED lighting
- ❧ Outdoor living space with access to urban trails
- ❧ PureWash Eco-Friendly laundry system
- ❧ Passive solar design
- ❧ Low-flow faucets and showerheads



Owner/Builder: Bobby and Cheryl  
Eccleston w/ Barden Home Builders  
Designer: T Averill Architect  
Award: Advanced

# Grand Canyon Trust Volunteer Barn



- ❧ Passive solar site orientation
- ❧ Energy efficient windows, natural lighting and solar tubes
- ❧ Site conservation: soil reuse, planned composting, xeriscaping, semi-pervious parking area
- ❧ Materials from old barn was salvaged and used on other local building projects.
- ❧ Low-water landscaping with native plants
- ❧ Metal roof for rain water harvesting
- ❧ On-site recycling and solar PV
- ❧ Permaculture landscape through community workshop



Builder: Harmony Builders

Designer: Rick Moore/PWM Architect

Award: Advanced



# Florence Duplex



- ❧ 99% Made in America materials and products
- ❧ Advanced framing: spray foam insulation
- ❧ High efficiency & Low-E windows
- ❧ Energy Star appliances, LED & CFL lighting
- ❧ HERS rating 46 and blower door testing
- ❧ Xeriscape landscaping
- ❧ Cross ventilation for seasonal cooling
- ❧ 90% of material waste was recycled and/or reused
- ❧ Durable finishes for floor, roof & siding
- ❧ Formaldehyde-free insulation for building envelop insulation



Owner: Lumberjack Lodging  
Builder: Hope Construction  
Award: Advanced

# Thomas Residence



- ❧ Accessory Dwelling Unit (ADU)-High density multi-use
- ❧ Rainwater distribution system
- ❧ No chemical pesticides or herbicides
- ❧ Energy Star appliances and passive clothing system
- ❧ Day-lighting strategy
- ❧ Natural ventilation strategy
- ❧ Recycled and salvaged material use
- ❧ Surplus building materials were recycled and/or donated
- ❧ Xeriscaping
- ❧ Low-flow toilets
- ❧ Energy Star space heating



Owner: Susan Thomas

Builder: Green Mountain Construction

Designer: JWA Architects

Award: Advanced



# Grand Canyon Science and Resource Management Building



- ❧ LEED Platinum Certified
- ❧ Passive solar design
- ❧ Smart wiring for lighting control and communication
- ❧ Natural lighting with solar tubes and light shelves
- ❧ Photovoltaic solar panels installed on the roof
- ❧ Solar hot water heaters
- ❧ Rainwater & Greywater reuse
- ❧ 85% of construction waste was recycled or repurposed
- ❧ Local and sustainable material used



Owner: Grand Canyon National Park Service  
Builder: Loven Contraction & Civil Design  
Engineering  
Designer: DCM Architect & Engineering, LLC  
Award: Advanced

# Ward Residence



- ❧ Top soil conservation & erosion control
- ❧ Staggered stud construction
- ❧ No pesticides or herbicides used on-site
- ❧ Energy Star appliances
- ❧ Low flow fixtures and toilets
- ❧ Airlock vestibule
- ❧ Pre-plumbed rainwater harvesting and greywater system
- ❧ Passive solar design
- ❧ Durable materials
- ❧ Staggered stud construction
- ❧ Permeable pathways
- ❧ All CFL lighting & LED lighting



Owner: Dave and Melody Ward

Builder: JKC, Inc.

Designer: Architectural Design Studios. LLC.

Award: Intermediate



# FUSD Camp Colton & The Friends of Camp Colton



- ❧ The Friends of Camp Colton with the support of a Community Task Group developed the Camp Colton Sustainability Action Plan (CCSAP) that was formally adopted on October 22, 2013
- ❧ CCSAP areas of focus:
  - ❧ Site Preservation, Recreational & History
  - ❧ Infrastructure, Facilities & Materials
  - ❧ Water Efficiency & Collection
  - ❧ Waste Management
  - ❧ Transportation
  - ❧ Education & Curriculum
  - ❧ Community Resource, Messaging & Stewardship



Owners: FUSD

Award: Community Model